

**Dreams and their Central Imagery: A factor analysis of the
CI construct and how this relates to Emotion and Trauma.**

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Doctor of Psychology at the University of Tasmania, July 2012.

I declare that this thesis contains no material which has been accepted for a degree or diploma by the University or any other institution, except by way of background information and duly acknowledged in the thesis, and to the best of my knowledge and belief no material previously published or written by another person except where due acknowledgement is made in the text of the thesis.

Glenn P. Bilsborrow

3 July 2012

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Statement of Co-Authorship

The following people contributed to the publication of the work undertaken as part of this thesis:

Paper 1 (Published)

"Exploratory Factor Analysis of Hartmann's Scale for Central Imagery and its Relationship to Dreamer Emotion"

Contributions: Glenn Bilsborrow (70%), Dr John Davidson (20%), Dr Jennifer Scott (10%)

Paper 2 (Submitted)

"Factors in Hartmann's Central Imagery Scale and their Relationship to Emotion and Traumatic Experiences"

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Statement of Ethical Conduct

The research associated with this thesis abides by the international and Australian codes on human and animal experimentation, the guidelines by the Australian Government's Office of the Gene Technology Regulator and the rulings of the Safety, Ethics and Institutional Biosafety Committees of the University.

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Abstract

The *contemporary theory of dreaming* proposed by Hartmann (2011) states that the function of dreaming is to make broad connections in the mind in order to integrate new material into memory systems. This process is not random but guided by the emotional concerns of the dreamer, which helps the dreamer by integrating sometimes distressing experiences by building meaningful emotional memory systems. This theory has as one of its core constructs a scale that measures the central imagery (CI) of a dream and this rating is said to be an indicator of the emotional concerns of the dreamer. Research has demonstrated that higher CIs are found after traumatic events, are higher in people with a history of abuse, and in people who have thinner boundaries. However, findings from a recent study suggested that CI may not be unitary, a fact which would have an impact on future research in this area. The present studies examined the underlying factor structure of CI. In study one, we collected the dreams of 99 people for a total of 230 dreams which were rated using Hartmann's CI scale as well as a scale which rates the descriptor words associated with CI. Dreamers also stated the level of emotion in their dreams and completed measures of dissociation and of boundaries in the mind. We found that CI was best thought of as having three dimensions, which were considered to be related to the *visual*, *impact* and *attention* aspects of the imagery. It was found that CI was not significantly related to boundaries or dissociation, but it was related to emotion. The impact and attention factors were related to emotion but the visual factor was not.

In study two, we attempted to replicate the three factor structure of CI and also to explore how CI was related to trauma in a person's past. We collected two dreams each from 143 participants and asked them to rate each dream again for emotion. We also asked whether they had a history of trauma, and if so, we explored variables associated with this trauma such as length of time since the trauma, level of distress at the time, peritraumatic events, trauma and trait coping, impact of the event on their lives and current distress. We expected to 1) replicate the three factor structure and also to find that 2) CI was related to current and trauma related distress, peritraumatic events, current functioning and dream emotion. There was partial support for hypothesis one in that statistically we replicated the three factor solution, but two factors had better economy. There was partial support for hypothesis two as overall CI and CI factors were positively correlated with dream emotion and peritraumatic events. However, CI was not related to other indications of trauma such as past and current distress, trauma related coping, the development of post-traumatic stress disorder symptoms, and the impact of the trauma on the person's life. CI was significantly related to emotion at a similar level to what was found in study one.

Hartmann's theory would predict current distress to be related to CI or the CI factors. As dream emotion and CI were correlated, the current findings raise the question as to the mechanisms that increase the intensity of CI. Future research should use longitudinal designs to explore the relationships between dream imagery and emotion, trauma and coping.